REMARKS

Applicants submit this Amendment in response to the non-final Office Action mailed June 21, 2006. Applicants respectfully traverse all pending objections and rejections and request reconsideration of the application, as amended.

Claims 1-7, 9-20, 22-30, 32-43, and 45-58 are currently pending. Applicants have canceled claims 8, 21, 31, and 44 without prejudice. In addition, Applicants have amended claims 1, 2, 6, 9-13, 15, 18-20, 24-25, 29, 32-36, 38, and 41-43 to more appropriately define their invention. Applicants have also added new claims 47-58. Claims 47-48, 50-52, 54, and 57-58 find support in the specification, for example, at paragraph [065] on page 16 . Claims 49 and 53 are supported, among other places, by the software applications 109 and 110 depicted in Fig. 1; claim 55 finds support, for example, at paragraph [088] on page 26. Claim 56 contains similar subject matter as pending claims 1 and 24.

Applicants have amended the specification to incorporate the U.S. Patent Application Nos. of commonly-assigned patent applications, correct minor grammatical errors, and more clearly describe the Applicants' figures. No new matter has been added.

Drawing Objections

The Examiner has objected to the drawings because they allegedly do not show the claimed "first data field," "second data field," and "third data field." Applicants respectfully disagree. Applicants point out that the claimed first, second, and third data fields are expressly shown in at least Figs. 1, 2, and 7. Specifically, each of these figures illustrates a table having a first data field configured to store an "ID" value, a

second data field configured to store a state value (e.g., state I, II, or III), and a third data field configured to store a default indicator (e.g., yes or no). Applicants further note that the scope of the invention, as defined by the claims, may be broader than the illustrative embodiments depicted in the figures. *See, e.g.*, M.P.E.P. § 2111.01(I), p. 2100-47 (8th Ed., Rev. 4, October 2005) ("One must bear in mind that, especially in nonchemical cases, the words in a claim are generally not limited in their meaning by what is shown or disclosed in the specification.") Because the claimed first, second, and third data fields are expressly shown, for example, in Applicants' Figs. 1, 2, and 7, the Examiner's drawings objection based on the alleged absence of these data fields should be removed.

The Examiner has objected to Fig. 1 because the "input means" 113 is not shown as being coupled or connected to the "output means" 112. In response, Applicants have amended Fig. 1 to illustrate that the input and output means are indeed coupled together. In addition, Applicants have also amended page 17, lines 2-3 (para. [066]) in the specification to more clearly set forth that "Computer System 101 may further comprise input means 113 ~~,~~ coupled to output means 112." In view of these amendments, Applicants submit that the pending objection to Fig. 1 should be withdrawn.

The Examiner has generally objected to the drawings because they do not depict the "Table 702" referred to on page 23, line 2 in the specification. Page 23, line 2 describes an illustrative column format that may be employed in the tables 702a-f depicted in Fig. 7, and "Table 702" is a short-hand reference for each of these depicted tables. However, for purposes of clarification, Applicants have amended page 23, line 2

(para. [080]) to remove the term "Table 702." Because the specification, as amended, no longer refers to "Table 702," Applicants submit that this drawing objection is now moot.

The Examiner has also objected to Fig. 1 for allegedly failing to show a plurality of computer systems as described on page 17, line 5 in the specification. Applicants respectfully disagree with this characterization of Fig. 1. As shown, Fig. 1 depicts an illustrative network connection 104 that is used to couple the exemplary computer system 101 to the network computers 114. By definition, the "network computers" comprise a plurality of interconnected computer systems.[1] Thus, contrary to the Examiner's suggestion, Fig. 1 illustrates network computers 114 which inherently include a plurality of computer systems, as described on page 17, line 5.

Specification Objections

The Examiner objected to page 4, line 4 (para. [009]) in the specification for omitting text after the sentence fragment "In addition, the foregoing background and summary are." Applicants have amended the specification to remove this sentence fragment, thereby obviating the Examiner's objection.

The Examiner also objected to page 17, line 4 (para. [066]) in the specification because "net connection 114" should read "network connection 114." Applicants have amended both page 17, line 4 and Fig. 1 to change the term "net connection" to

[1] A network of computers is defined as "a system of computers interconnected by telephone wires or other means in order to share information." The American Heritage College Dictionary (3d ed 2000).

"network connection," as suggested. Accordingly, Applicants submit that this objection may be removed.

The Examiner requested that the Applicants update cross-references to related patent applications listed in para. [002] of the specification. By this amendment, Applicants have updated the U.S. Patent Application Nos. of the cross-referenced applications, as suggested. Thus, this objection to the specification can also be withdrawn.

35 U.S.C. § 112, ¶1 Rejections

The Examiner rejected claims 1-46 under 35 U.S.C. § 112, ¶1 as failing to comply with the written description requirement because "[t]he detailed description of the disclosure and the drawings do not appear to describe the limitation 'creating an electronic data element comprising a first data field,' 'a second data field', or 'a third data field'." Applicants respectfully traverse this rejection and submit that the detailed description and drawings make repeated references, and fully disclose, these allegedly non-described claim elements.

First, Applicants' Figs. 1, 2, and 7 each illustrate at least one table having a first data field configured to store an "ID" value, a second data field configured to store a state value (e.g., state I, II, or III), and a third data field configured to store a default value (e.g., yes or no). In the illustrative embodiments shown in Figs. 1, 2, and 7, each of the first, second, and third data fields is depicted as a separate column in a table. Clearly, the mere existence of these first, second, and third data fields in the exemplary tables explicitly or at least inherently discloses that the data fields were "created," as claimed.

Furthermore, in the illustrative embodiments of Figs. 1, 2, and 7, each row (or "line") in a table defines a different electronic data element. *See, e.g.*, Specification, para. [028] ("In computer programming languages, an electronic data element may be implemented as one or more lines of one or more tables, each line having one or more fields."); para [069] ("Fig. 2 shows an implementation of an electronic data element in the form of five lines of a table 200 having three columns: ID, state, and default. This organization of table 200 can be interpreted as the structure of the electronic data element.") Again, the existence of the exemplary electronic data elements depicted in Figs. 1, 2, and 7 explicitly or at least inherently discloses that they were "created," as claimed.

Second, creation of the claimed electronic data element and its first, second, and third data fields is described repeatedly throughout the Applicants' specification. By way of example, and not limitation, consider the following passages in the specification:

- "One or more of the following operations may be allowed to be performed on the electronic data element: create an electronic data element having the first state..." *Id.*, para. [031].
- "A third embodiment may further comprise creating a further electronic data element and setting it to the first state." *Id.*, para. [048].
- "The electronic data elements may be implemented in a table 106 comprising a column for identifiers (abbreviated as "ID" and numbered consecutively, e.g. ID1, ID2, ID3, the latter being defined as default ID, abbreviated as "DID"), a column for the state and a column for the default quality. Table 106 may be stored in memory 102. The default quality may

be implemented by adding – in general sense - "yes" in a field for the default status ("default?" in Fig. 1))." *Id.*, para. [066].

- "It is repeated in this context that the electronic data element could also be implemented by three tables having only one column, ID, state, default?, respectively, linked together by the respective lines, so as to behave as one table." *Id.*, para. [071].

In view of the foregoing, Applicants submit that the pending 35 U.S.C. § 112, ¶1 rejections should be removed.

35 U.S.C. § 112, ¶2 Rejections

The Examiner rejected claims 6, 11, 29, and 34 under 35 U.S.C. § 112, ¶2 because the term "the data structure" lacks a proper antecedent basis. In response, Applicants have amended these claims to remove the term "the data structure," thereby obviating this rejection.

The Examiner also rejected claims 13 and 36 because the term "the third field" lacks a proper antecedent basis. Applicants have amended claims 13 and 36 to correct their dependencies. As such, the term "the third data field," as presently recited in amended claims 13 and 36, properly refers to its antecedent use. Accordingly, Applicants submit that these 35 U.S.C. § 112, ¶2 rejections can be withdrawn.

35 U.S.C. § 101 Rejections

The Examiner rejected claims 1-46 under 35 U.S.C. § 101 because, allegedly, "as presently written the [Applicants'] disclosure appears to omit details of how to implement the claimed limitation creation of 'a first data field', a 'second data field' as recited in the independent claims." Office Action, ¶14. The Examiner further contends

that "[t]he presently written claim appears to recite non-functional arrangements of data with no tangible result and is therefore non-statutory subject matter." *Id.*

As discussed above, Applicants' specification fully discloses the creation of a first data field and second data field, as claimed. Indeed, these data fields are explicitly depicted at least in Figs. 1, 2, and 7 (a first data field configured to store an "ID" value and a second data field configured to store a state value (e.g., state I, II, or III)). The first and second data fields are also repeatedly described throughout the Applicants' written description. *See, e.g.*, discussion above regarding the pending 35 U.S.C. § 112, ¶1 rejections. Accordingly, Applicants urge that the Examiner is incorrect in her suggestion that the Applicants' disclosure omits details of "how to implement the claimed limitation creation of 'a first data field', a 'second data field' as recited in the independent claims."

Additionally, Applicants have amended their independent claims 1, 24, and 56 to recite further functionality for achieving the tangible result of "replicating one or more data objects from a source system to a target system." For example, Applicants have added the following functional steps to their representative independent claim 1: "processing the one or more data objects in accordance with a software application," "storing the one or more processed data objects on the source system," "changing the state of the identifier in the electronic data element to indicate that the one or more processed data objects are ready to be replicated from the source system to the target system," and "replicating, in response to changing the state of the identifier, the one or more processed data objects from the source system to the target system."

For at least the above-noted reasons, Applicants respectfully submit that the pending 35 U.S.C. § 101 rejections should be removed.

35 U.S.C. § 103(a) Rejections

The Examiner rejected claims 1-5, 21-28, and 44-46 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,764,973 to Lunceford et al. ("Lunceford") in view of U.S. Patent No. 6,016,497 to Suver ("Suver"). The Examiner did not reject claims 6-20 or 29-43 over the art of record.

Applicants respectfully traverse the rejection of claims 1-5, 21-28, and 44-46 under 35 U.S.C. § 103(a) as being obvious from Lunceford in view of Suver. A *prima facie* case of obviousness has not been established. "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)." M.P.E.P. § 2142, 8th Ed., Rev. 2 (May 2004), p. 2100-128. A *prima facie* case of obviousness has not been established because, among other things, neither Lunceford nor Suver, whether taken singly or in combination, teaches or suggests each and every feature of Applicants' independent claims 1, 24, and 56.

Consider Applicants' representative independent claim 1, as amended, which calls for a combination including, for example, "creating an electronic data element comprising a first data field and a second data field, wherein the first data field contains data representing an identifier assignable to the one or more data objects and the second data field contains data representing a state of the identifier," "assigning the identifier to the one or more data objects," "storing the one or more processed data objects on the source system," "changing the state of the identifier in the electronic data element to indicate that the one or more processed data objects are ready to be replicated from the source system to the target system," and "replicating, in response to changing the state of the identifier, the one or more processed data objects from the source system to the target system." Applicants respectfully submit that Lunceford and Suver each fails to teach or suggest at least the above-noted recitations for replicating one or more data objects from a source system to a target system, as recited in Applicants' amended claim 1. Accordingly, there is no possible combination of these references that can properly anticipate or render obvious Applicants' claim 1.

Lunceford teaches a system where "a user can simply request logical data elements that he would like to see and the system will calculate links necessary to return the proper data from the appropriate data structures." Lunceford, Abstract. To that end, the system in Lunceford automatically generates structured query language ("SQL") statements for retrieving the user-requested data. *See id.*, Title; col. 3, ll. 15-20. While Lunceford teaches a technique for *retrieving* user-requested data, Lunceford does not teach or suggest a method for "***replicating*** one or more data objects from a source system to a target system" using the steps recited in Applicants' amended claim 1.

In the Office Action, the Examiner appears to suggest that Fig. 11 and col. 10, ll. 43-65 in Lunceford teach replicating data objects from a source system to a target system. Office Action, ¶21. Applicants respectfully disagree with the Examiner's characterization of these cited portions of Lunceford.[2] More specifically, Fig. 11 is a flowchart describing a technique for automatically generating a SQL statement in response to a user selecting a "Join" type of database query. *See* Lunceford., col. 9, ll. 60-62 ("the user indicates by keystroke or input device which of the following types of queries he would like to perform: 'Join' 332..."); col. 10, ll. 39-41 ("As seen in Fig. 11, if the user selects 'Join', an SQL statement which logically links the selected data elements will be created in the following manner."). Thus, Fig. 11 and its corresponding description at col. 10, ll. 43-65 teach *retrieval* of user-selected data by generating a SQL query. In sharp contrast, Applicants' amended claim 1 recites, for example, "replicating one or more data objects from a source system to a target system." Consequently, the SQL query generation taught in the Examiner's cited portions of Lunceford does not teach or suggest "replicating one or more data objects from a source system to a target system" using the steps explicitly recited in Applicants' claim 1.

Suver likewise fails to teach or suggest a method for "replicating one or more data objects from a source system to a target system," as claimed. Instead, Suver teaches "[a] system and computer-implemented methods for accessing and storing information embedded in a column of a database row." Suver, Abstract. For example,

[2] The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

as shown in Fig. 6 of Suver, a nested collection of data structures 610 is embedded within a single column 608g of a database row 605. *See also*, Suver, col. 11, ll. 51-56. Since Suver is directed towards accessing and storing data in structures embedded in a database, Suver is completely silent regarding "***replicating*** one or more data objects from a source system to a target system" using the steps recited in Applicants' amended claim 1.

In sum, neither Lunceford or Suver, whether taken singly or in any proper combination, teach or suggest the Applicants' claimed method of "replicating one or more data objects from a source system to a target system," using the steps recited in amended claim 1. In fact, the word "replicating" (or its variants) is not included anywhere in either Lunceford or Suver. More particularly, Applicants submit that claim 1, as amended, is patentable over Lunceford and Suver because of their complete absence of at least "creating an electronic data element comprising a first data field and a second data field, wherein the first data field contains data representing an identifier assignable to the one or more data objects and the second data field contains data representing a state of the identifier," "assigning the identifier to the one or more data objects," "storing the one or more processed data objects on the source system," "changing the state of the identifier in the electronic data element to indicate that the one or more processed data objects are ready to be replicated from the source system to the target system," and "replicating, in response to changing the state of the identifier, the one or more processed data objects from the source system to the target system," as recited in amended claim 1.

For at least the foregoing reasons, independent claim 1, as amended, is allowable in its present form. Independent claims 24 and 56, although different in scope, recite language similar to amended independent claim 1 and are thus also allowable for at least the same reasons. Claims 2-7, 9-20, 22, 23, 25-30, 32-43, 45-55, 57, and 58 depend on allowable independent claims 1, 24, and 56, and are therefore allowable for at least the same reasons.

CONCLUSION

The preceding remarks are based only on the arguments in the Office Action, and therefore do not address patentable aspects of the invention that were not addressed by the Examiner in the Office Action. The claims may include other elements that are not shown, taught, or suggested by the cited art. Accordingly, the preceding remarks in favor of patentability is advanced without prejudice to other bases of patentability.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: September 21, 2006

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AMENDMENTS TO THE DRAWINGS:

The attached sheets of drawings include the Examiner's requested changes to Fig. 1. Applicants attach a Replacement Sheet including the corrected Fig. 1 and an Annotated Sheet depicting where changes were made. Specifically, Applicants have added an arrow to indicate that the input means 113 is directly coupled to the output means 112. Applicants have also changed the text in reference box 104 from "Net Connection" to "Network Connection," as required by the Examiner.

Attachments: Replacement Sheet of Figure 1
Annotated Sheet showing changes to Figure 1

 ANNOTATED SHEET

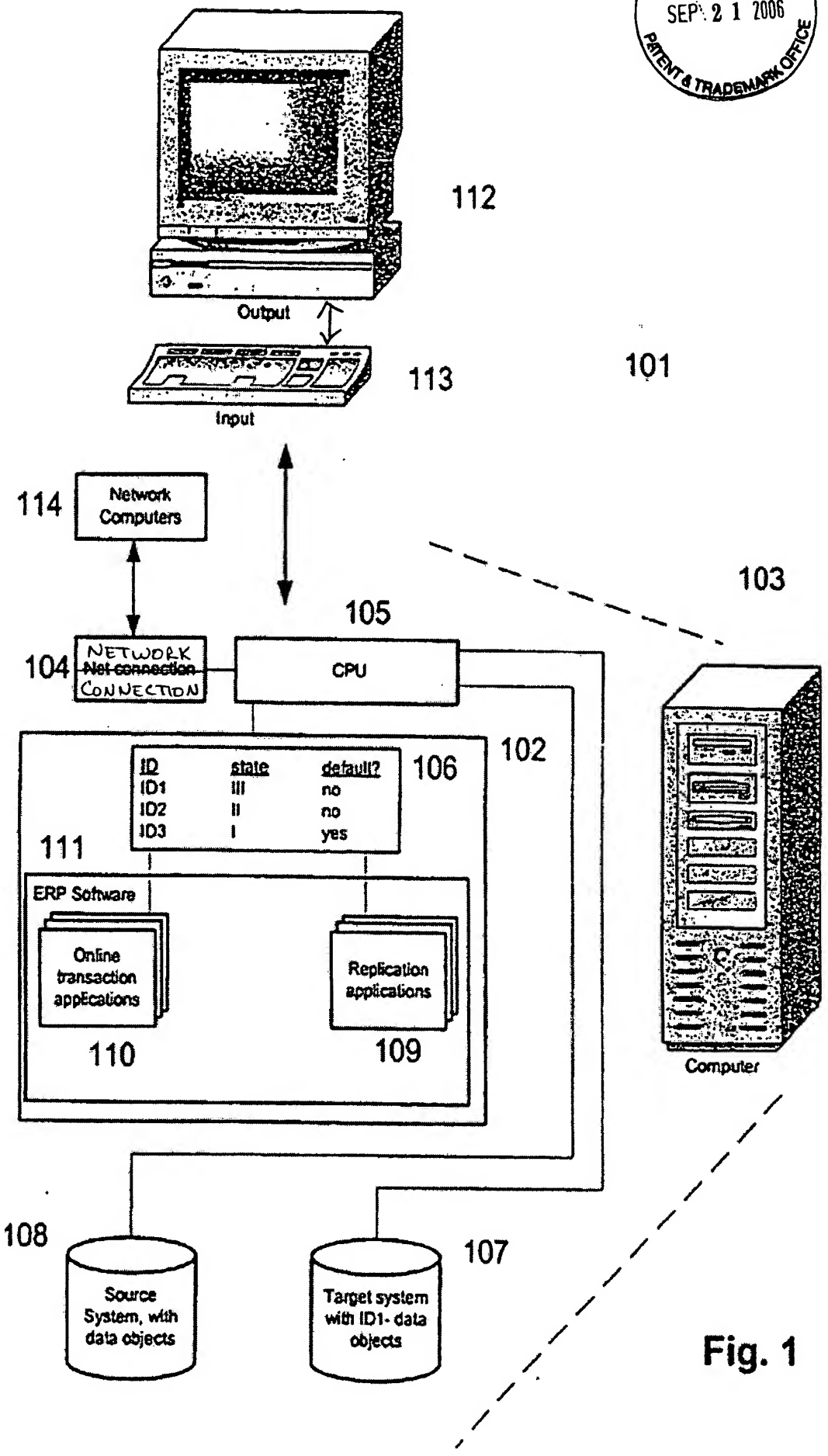

Fig. 1